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EXAMINER

GRIER, LAURA A

ART UNIT

PAPER NUMBER

2644

DATE MAILED: 05/08/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/813,722

Applicant(s)

JORDAN ET AL.

Examiner

Laura A Grier

Art Unit

2644

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-47 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-15, 23-35 and 43-45 is/are rejected.
- 7) ☒ Claim(s) 24, 16-22, and 36-42 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The abstract of the disclosure is objected to because lines, 1, 5, and 8, respectively, recite the word "invention". Correction is required. See MPEP § 608.01(b).

2. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Claim Objections

3. **Claim 24** is objected to because of the following informalities: lines 1-2, recite "second predetermined settings". There is lack of antecedent basis. Appropriate correction is required.

4. The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

5. Misnumbered claims 39-45, respectively have been renumbered as 40-47, respectively.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. **Claims 46-47** are rejected under 35 U.S.C. 102(b) as being anticipated by Plunkett, U. S. Patent No. 5386478.

Regarding claim 46, Plunkett discloses a sound system remote control with acoustic sensor (figure 1). Plunkett's disclosure comprises a remote control unit (34) for providing adjustments of test signals output by loudspeakers and received by a microphone (36) located on the remote control (col. 1, lines 60-68 and col. 2, lines 1-6), which reads on a sensor adapted to receive a test signal from a multi-channel surround sound system, wherein the multi-channel surround sound system is inherently supported by the fact that Plunkett indicates that the invention may be implemented in various multi-channel sound systems having three, four or

Art Unit: 2644

more channels, which may constitutes as a multi-channel surround sound system; electronic processing circuitry included in the remote control unit for analyzing the test signal and make adjustments as needed of the predetermined settings, wherein the predetermined settings (time delay) of Plunkett are provided via a program or hardware within the remote control, which constitutes predetermined setting (col. 3, lines 9-35), thereof, and a communication IR control link (32) of the remote control for relating information to the sound system (col. 4, lines 5-41, and 57-68, and col. 5, lines 1-6).

Regarding **claim 47**, Plunkett discloses a sound system remote control with acoustic sensor (figure 1). Plunkett's disclosure comprises a remote control unit (34) for providing adjustments of test signals output by loudspeakers and received by a microphone (36) located on the remote control (col. 1, lines 60-68 and col. 2, lines 1-6), which reads on a sensor adapted to receive a test signal from a multi-channel surround sound system, wherein the multi-channel surround sound system is inherently supported by the fact that Plunkett indicates that the invention may be implemented in various multi-channel sound systems having three, four or more channels, which may constitutes as a multi-channel surround sound system; and a communication IR control link of the remote control via the command modules 28 and 30 for relating information to the sound system, which indicates a communication. Since the modules 28 and 30 of Plunkett is a communication device, and since 28 sends a test signal to 24L and 24R of the surround sound system, Plunkett inherently comprises a "communication device adapted to send the test signal to the multi-channel surround sound system", (col. 3, lines 9-35 and col. 4, lines 57-68, and col. 5, lines 1-6).

8. **Claims 25-43** are rejected under 35 U.S.C. 102(b) as being anticipated by Plunkett, U. S. Patent No. 5386478.

Regarding **claim 25**, Plunkett discloses a sound system remote control with acoustic sensor (figure 1). Plunkett's disclosure comprises a remote control unit (34) for providing adjustments of test signals output by loudspeakers and received by a microphone (36) located on the remote control (col. 1, lines 60-68 and col. 2, lines 1-6), which reads on implementation of sending a test signal based upon a setting to a receiver for a home theater system, wherein the home theater system is inherently supported by the fact that Plunkett indicates that the invention may be implemented in various multi-channel sound systems having three, four or more channels, which may constitutes as a home theater system with multi-channel sound; the microphone being a receiver means detects the test signal, and electronic processing circuitry included in the remote control unit for analyzing the test signal and make adjustments as needed of the predetermined settings, wherein the predetermined settings (time delay) of Plunkett are provided via a program or hardware within the remote control, which constitutes predetermined setting (col. 3, lines 9-35), thereof, which reads on the implementation of processing the test signal and a communication IR control link (32) of the remote control via the command modules 28 and 30 for relating the adjusted test signal information to the sound system for modification purposes, thereof (col. 4, lines 5-41 and 57-68 and col. 5, lines 1-6).

Regarding **claim 26**, Plunkett discloses everything claimed as applied above (see claim 25). Plunkett further indicates that the process may be repeated for adequate compensation (col. 3, lines 52-65).

Regarding **claim 27**, Plunkett discloses everything claimed as applied above (see claim 25). Plunkett further indicates the test signal as an acoustic test signal as indicated by the sound being received via an acoustic path and the sensor is an acoustic signal.

Regarding **claims 28-31**, Plunkett discloses everything claimed as applied above (see claim 25). Plunkett further indicates that the predetermined adjusted may be among, the sound pressure level, frequency bandwidth, frequency equalization, and time delay (col. 2, lines 37-42, and 46-63, and col. 4, lines 1-41).

Regarding **claim 32**, Plunkett discloses everything claimed as applied above (see claim 25). Plunkett further indicates test signal receiver as a microphone (34).

Regarding **claims 12 and 34**, respectively, Plunkett (Plunkett et al.) discloses everything claimed as applied above (see claims 1 and 25, respectively). It is inherent that the electric processing of Plunkett is an analog process, where the audio devices are conventional audio devices such as a tape player and phonograph, etc. (col. 2, lines 35-36).

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. **Claims 25 and 33** are rejected under 35 U.S.C. 102(e) as being anticipated by Zawilski, U. S. Patent No. 6069567.

Regarding claims 25, Zawilski discloses an audio-recording remote control and method therefor. Zawilski's disclosure comprises a remote control comprising two microphone for receiving outputs by loudspeakers of A/V equipment (home theater), which constitutes as a test signal from a receiver of a home theater with predetermined settings, and detecting the test

signal (col. 2, lines 55-67, col. 3, lines 1-15), wherein feedback is provided back to the A/V equipment for adjusting the parameters and processor using digital signal processing techniques for processing the received signal of the remote control and the adjust signal for modifying the sets are transmitted (col. 3, lines 16-65).

Regarding claim 33, Zawilski discloses everything claimed as applied above (see claim 25). Zawilski further discloses the processor using digital signal processing techniques, which indicates a digital signal processor (col. 4, lines 27-31).

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. **Claims 1-10** are rejected under 35 U.S.C. 103(a) as being unpatentable over Plunket in view of Kuusama et al, U. S. Patent No. 6332026.

Regarding claim 1, Plunkett discloses a sound system remote control with acoustic sensor (figure 1). Plunkett's disclosure comprises a remote control unit (34) for providing adjustments of test signals received by the microphone (36) located on the remote control, which reads on a sensor (col. 1, lines 60-68 and col. 2, lines 1-6); electronic circuitry (processor) included in the remote control unit for analyzing the test signal (col. 3, lines 21-27), which provides inherent support of a processor; a communication IR control link (32) of the remote control for relating signal information to the sound system and the remote control device via the command modules

Art Unit: 2644

found on the main unit of the speaker system, the command modules are 30 and 28 – 1st communication device (col. 3, lines 9-65); stereo system including a main stereo unit comprising a plurality of loudspeakers coupled thereto (col. 1, lines 60-68 and col. 2, lines 1-6), wherein the stereo system is inherently a multi-channel surround sound system as evident by the fact that Plunkett discloses that the invention may be implemented in various multi-channel sound systems having three, four or more channels, which may constitutes as a multi-channel surround sound system (col. 5, lines 1-6) and inherently the main stereo unit, constitutes as the main surround sound unit –reference 18- (col. 1, lines 60-65); a communication IR control link (32) of the remote control for relating signal information to the sound system and the remote control device via the command module found on the remote control (as previously indicated) just as command module 30 of the main unit, constitutes as a 2nd communication device, however, a numerical reference is not provided for that command module (see figure 1) and (col. 3, lines 9-65 and col. 4, lines 5-16 and 57-68); further, the main stereo unit generates the test based on a 1st predetermined setting such as time delay parameters and make adjustments as needed of the predetermined settings, wherein the predetermined settings are time delay parameters in respect to the listening location of the listener (col. 3, lines 9-65 and col. 4, lines 5-16), and upon receiving the acoustic test signal by the microphone of the remote control, in respect to the predetermining setting of delay (the hearing spatial balance of the listener), the signal is output by the remote control to the electronic circuitry included in the remote control unit for analyzing the test signal and make adjustments as needed of the predetermined setting characteristics of the acoustic test signal, wherein the predetermined settings (time delay) of Plunkett are provided via a program or hardware within the remote control, wherein the adjusted

Art Unit: 2644

or corrected information signal, which similar to the 1st predetermined set, is sent to the main surround unit via communication IR link, therein, as of the claimed limitation. However, Plunkett fails to specifically disclose the stereo unit (surround sound unit) comprising a multi-channel decoder with an amplifier (surround sound circuitry). The examiner maintains that such surround sound circuitry was well known in the art.

Regarding the surround sound circuitry, in a similar field of endeavor, Kuusama et al. (herein, Kuusama), discloses home theater equipment. Kuusama disclosure comprises a surround sound system and/or unit comprising a decoder and a multi-channel amplifier (col. 1, lines 16-20).

It would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the invention of Plunkett by implement a surround system with a decoder for the purposed of the encoding and processing the data of an audio program for adequate transmission, and an amplifier for the purpose of enhancing the strength and quality of the decode of audio data.

Regarding **claim 2**, Plunkett and Kuusama (herein, Plunkett et al.) disclose everything claimed as applied above (see claim 1). Kuusama further discloses the surround sound unit as THX post processing(col. 1, lines 40-43), where THX is a well known and widely used surround sound technology.

It would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the invention of Plunkett et al. by implement a THX surround sound system for the purpose of providing optimal audio processing.

Regarding **claims 3-7**, Plunkett et al. discloses everything claimed as applied above (see claim 1). Plunkett further indicates that the predetermined adjusted may be among, the sound pressure level, frequency bandwidth, frequency equalization, and time delay (col. 2, lines 37-42, and 46-63, and col. 4, lines 1-41).

Regarding **claim 8**, Plunkett et al. discloses everything claimed as applied above (see claim 25). Plunkett further indicates an acoustic sensor as a microphone (col. 1, lines 60-65 and reference 34).

12. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Plunkett et al.

Regarding claim 9, Plunkett et al. discloses everything claimed as applied above (see claim 8). However, Plunkett et al. fails to disclose the microphone as a condenser microphone. The use of a condenser microphone was well known in the art. Such microphones are commonly used in devices in which a microphone of extremely small size is required. Thus it would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the invention of Plunkett et al. by incorporating a condenser microphone in the remote control device for it convenient and optimal size, and as well as for a good response and durability.

Regarding **claim 10**, Plunkett and Kuusama (herein, Plunkett et al.) disclose everything claimed as applied above (see claim 1). Kuusama further discloses a surround sound unit comprising Dolby Decoding technology (col. 1, lines 40-43), where Dolby decoding is a well known and widely used decoding technique.

It would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the invention of Plunkett et al. by implement a surround system with a decoder for the purposed of the encoding and processing the data of an audio program for adequate transmission, and providing optimal audio processing.

Regarding **claims 13-15 and 35**, Plunkett et al. discloses everything claimed as applied above (see claims 1 and 25 respectively). However, Plunkett fails to specifically disclose the remote control having an output display device (a LED or a LCD screen). The examiner maintains that such display devices were commonly known in the art. Thus, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the invention of Plunkett et al. by implementing a LED and/or a LCD for providing indication of a transmitted signal to another device such as a stereo system or the receiver of a television, wherein a LED and LCD are commonly used components of a remote control device.

13. Claims 23 and 43-45 are rejected under 35 U.S.C. 102(b) as being anticipated by Plunkett in view of Kokkosoulis et al., U. S. Patent No. 6118880.

Regarding claim 23, Plunkett discloses everything claimed as applied above (see claim 25). However, Plunkett fails to specifically disclose the main surround sound unit including a network connection device coupled to the Internet. The examiner maintains that such a technique was well known in the art.

Regarding surround sound unit being coupled to the Internet, in a similar field of endeavor, Kokkosoulis discloses a system for maintaining audio balance for a stereo system wherein a signal is received and transmitted via a remote control for adjusting the output of the

Art Unit: 2644

speakers of the audio system in respect to the listener's position for a surround sound system (col. 1, lines 36-40 and col. 2, lines 45-52). Kokkosoulis' teaches that system may be implemented one from various audio systems and video system (DVD), wide screen television, or typical home theaters (col. 1, lines 15-25) and a personal computer with multi-media features, or even a public announcement environment (col. 5, lines 38-47), which constitutes the surround sound unit coupled to the Internet.

It would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the invention of Plunkett by implement the technique of the surround sound system communicating with the Internet for acquire audio derived from other means of audio entertainment for the purpose to providing enhanced and optimal audio sound quality.

Regarding **claims 43-45**, Plunkett discloses everything claimed as applied above (see claim 25). However, Plunkett fails to specifically disclose the test signal being obtained from the Internet, and program source with the program source being a DVD. The examiner maintains that such a technique was well known in the art.

Regarding a test signal being derived from a program such as DVD, in a similar field of endeavor, Kokkosoulis discloses a system for maintaining audio balance for a stereo system wherein a signal is received and transmitted via a remote control for adjusting the output of the speakers of the audio system in respect to the listener's position (col. 1, lines 36-40). Kokkosoulis' signal may be one from various audio systems and video system (DVD), wide screen television, or typical home theaters (col. 1, lines 15-25) and a personal computer with

multi-media features, or even a public announcement environment (col. 5, lines 38-47), which constitutes the signal being one from the Internet, or a DVD.

It would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the invention of Plunkett by implement the technique based on signals derived from other means of audio entertainment for the purpose to providing adequate parameter adjustments to the listening environment of a listener for providing optimal audio sound quality.

14. Claims 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Plunkett in view of Zawilski, U. S. Patent No. 6069567.

Regarding claim 11, Plunkett discloses everything claimed as applied above (see claim 1). However, Plunkett fails to specifically disclose the electrical processing circuit as a digital signal processor for testing the signal received by the remote control. The examiner maintains that a digital signal processor was well known in the art.

Regarding the digital signal processor, in a similar field of endeavor, Zawilski discloses an audio-recording remote control and method therefor. Zawilski's disclosure comprises a remote control comprising a processor using digital signal processing techniques, wherein the remote control is used for adjust sound parameters output by loudspeakers (col. 4, lines 25-31 and col. 2, lines 55-67 and col. 3, lines 1-8).

It would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the invention of Plunkett by implementing a digital signal processor for the purpose of processing of converting the electrical signal to a digital signal.

Allowable Subject Matter

15. Claims 16-22, and 36-42 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Citation of Prior Art

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Yoon et al., U. S. Patent No. 5757438, discloses an apparatus for compensating for image display characteristics.

Ishigaki, U. S. Patent No. 6072470, discloses a remote control apparatus.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura A Grier whose telephone number is (703) 306-4819. The examiner can normally be reached on Monday - Friday, 7:30 am - 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Forester W. Isen can be reached on (703) 305-4386.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Art Unit: 2644


Washington, D.C. 20231


Or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive,
Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding
should be directed to the receptionist whose telephone number is (703) 305-4700.

LAG 
April 16, 2003


FORESTER W. ISEN
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TECHNOLOGY CENTER 2600